

A. CLASSIFICATION OF SUBJECT MATTER Int.Cl <sup>7</sup> F28F9/26			
According to International Patent Classification (IPC) or to both national classification and IPC			
B. FIELDS SEARCHED			
Minimum documentation searched (classification system followed by classification symbols) Int.Cl <sup>7</sup> F28F9/26			
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Japanese Utility Model Gazette 1926-1996, Japanese Publication of Unexamined Utility Model Applications 1971-2003, Japanese Registered Utility Model Gazette 1994-2003, Japanese Gazette Containing the Utility Model 1996-2003			
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)			
C. DOCUMENTS CONSIDERED TO BE RELEVANT			
Category*	Citation of document, with indication, where ap	opropriate, of the relevant passages	Relevant to claim No.
Y	JP 2001-336896 A(MATSUSHIT INDUSTRIAL CO.,LTD.)2001.1		1-19
Y	JP 2000-81294 A(DENSO CORPORATION) 2000.03.21 (Family: None)		1-19
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Further documents are listed in the continuation of Box C.  See patent family annex.			
* Special categories of cited documents:  "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand to be of particular relevance  * Special categories of cited documents:  "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention			
"E" earlier a	er application or patent but published on or after the international "X" document of particular relevance; the claimed invention cannot date considered novel or cannot be considered to involve an invention cannot be considered to invention cannot be cannot be considered to invention cannot be cannot		laimed invention cannot be
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other		step when the document is taken alone  "Y" document of particular relevance; the claimed invention cannot be	
special reason (as specified)  "O" document referring to an oral disclosure, use, exhibition or other means		considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art	
"P" document published prior to the international filing date but later than the priority date claimed			
Date of the actual completion of the international search  16.12.03		Date of mailing of the international search report  13.01.04	
Name and mailing address of the ISA/JP		Authorized officer 3M 8610	
Japan Patent Office		YOICHI NAGASAKI (	<b>Sa</b>
3-4-3, Kasumigaseki, Chiyoda-ku, Tokyo 100-8915, Japan		Telephone No. +81-3-3581-1101 Ex	xt. 3377